REMARKS

Claims 1-29 are pending in this application.

Claims 1-4, 9, 10, 17, 18, 23, and 24 have been rejected.

Claims 5-8, 11-16, 19-22, and 25-29 have been objected to.

Reconsideration and full allowance of Claims 1-29 are respectfully requested.

I. ALLOWABLE CLAIMS

The Applicant thanks the Examiner for the indication that Claims 5-8, 11-16, 19-22, and 25-29 would be allowable if rewritten in independent form to incorporate the elements of their respective base claims and any intervening claims. Because the Applicant believes that the remaining claims in this application are allowable, the Applicant has not rewritten Claims 5-8, 11-16, 19-22, and 25-29 in independent form.

II. EXAMINER'S COMMENTS REGARDING PREVIOUS ARGUMENTS

The Examiner has noted that the previous arguments with respect to claims 1, 17 and 23 have been rendered moot in view of the Examiner's new ground(s) of rejection. Although not explicitly stated, Applicant considers this an indication that the Examiner has withdrawn the previous rejection(s) of claims 1, 17 and 23. If this is not accurate, Applicant respectfully requests that the Examiner explicitly state so.

The Applicant respectfully traverses the remainder of the Examiner's remarks regarding previous arguments.

III. FIRST REJECTION UNDER 35 U.S.C. § 103

The Office Action rejects Claims 1-4, 17-18 and 23-24 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,810,084 to Jun et al. ("Jun") in view of U.S. Patent No. 5,903,324 to Lyons et al. ("Lyons"). This rejection is respectfully traversed.

Initially, Applicant objects to the rejections based on the Jun reference as being improper, since Jun is not a proper prior art reference. The present application was filed on February 12, 2001. The Jun patent was filed on November 28, 2000 – less than 3 months prior to the filing of the present application – and claims foreign application priority to June 12, 2000 – only 9 months prior to the filing of the present application. Applicant respectfully requests the withdrawal of all rejections improperly based upon the Jun reference.

Impropriety of the Jun reference notwithstanding, Applicant respectfully submits that the Examiner has improperly rejected these claims with highly speculative and highly selective hindsight combinations of the cited references – combinations not prospectively taught or suggested to one of ordinary skill in the art at the time the present invention was made.

Applicant addresses the rejection of each claim as follows.

a. Claim 1

The Examiner concedes that "Jun does not disclose each of one or more of the data bytes containing both bearing [sic] and non-information bearing bits."

Applicant agrees.

Applicant submits that Jun neither teaches nor suggests a data byte "containing both information bearing bits and non-information bearing bits", nor any reason why

such a byte structure might be necessary or desirable. Furthermore, Applicant submits that Jun appears – at the packet level – to teach away from non-information bearing packets. Jun teaches and suggests the desirability of substituting training data (i.e., information) for null packets. (Col. 3, lines 23-24; Col. 9, lines 30-32).

Nonetheless, the Examiner claims that "it would have been obvious to one of ordinary skill in the art to combine the teachings of Jun and Lyons, as a whole, for receiving and viewing HDTV television programs and other programming in an efficient, precise manner" since "Lyons teaches that each of the one or more of the data bytes containing both bearing bits and non-information bearing bits."

The Examiner then, parenthetically, points out a fatal flaw in the suggested interpretation of Lyons. The Examiner concedes that Lyons instead discloses "each one or more of the data bytes contain important data and non-important data." The Examiner appears to equate two types of information (i.e., data) – important and non-important – to information and no information.

Applicant respectfully submits that non-important information is not equivalent to no information.

Furthermore, Applicant can find no such equivalency taught or suggested in Lyons. Applicant respectfully requests that the Examiner specifically cite the portion of Lyons that teaches or suggests equivalency between non-important information and no information, respectfully noting that the citations made by the Examiner do not appear to show any such teaching or suggestion.

The deficiencies of both Jun and Lyons notwithstanding, Applicant further submits that one of ordinary skill in the art, at the time the present invention was made, having only the cited references before him, would not find teaching or motivation sufficient to prompt him to: 1) Evaluate the Jun reference and understand it, including its apparent teaching – at the packet level – of substituting data (i.e., information) for null packets; 2) spontaneously decide that only that portion of the Jun reference was wrong, and that – at a bit level – it would be desirable to have both information and non-information bits within a single byte; 3) seek out and find the Lyons reference; 4) speculatively read into the Lyons reference an equivalency between important data and information, and between non-important data and no information; 4) speculatively and selectively cull from Lyons a byte structure based upon such an equivalency; and 5) successfully modify Jun's packet level operations and constructs to function on a bit level to integrate the inferred Lyons byte structure.

Applicant respectfully submits that there is no teaching or suggestion in either Jun or Lyons sufficient to motivate one of ordinary skill to embark upon such a highly speculative and selective combination of two references. Even if such a complicated effort were successful, the result would still not yield the required limitations of claim 1.

Claim 1 overcomes the rejection and is in allowable form. Applicant respectfully requests reconsideration and allowance of claim 1.

b. Claims 2-4

Claims 2-4 depend from allowable claim 1 and provide further limitations distinguishing over the cited references or provide claim differentiation.

Claims 2-4 overcome the rejection and are in allowable form. Applicant respectfully requests reconsideration and allowance of claims 2-4.

c. Claim 17

The Examiner concedes that "Jun does not disclose each of one or more of the data bytes containing both bearing [sic] and non-information bearing bits."

Applicant agrees.

Applicant submits that Jun neither teaches nor suggests a data byte "containing both information bearing bits and non-information bearing bits", nor any reason why such a byte structure might be necessary or desirable. Furthermore, Applicant submits that Jun appears – at the packet level – to teach away from non-information bearing packets. Jun teaches and suggests the desirability of substituting training data (i.e., information) for null packets. (Col. 3, lines 23-24; Col. 9, lines 30-32).

Nonetheless, the Examiner claims that "it would have been obvious to one of ordinary skill in the art to combine the teachings of Jun and Lyons, as a whole, for receiving and viewing HDTV television programs and other programming in an efficient, precise manner" since "Lyons teaches that each of the one or more of the data bytes containing both bearing bits and non-information bearing bits."

The Examiner then, parenthetically, points out a fatal flaw in the suggested interpretation of Lyons. The Examiner concedes that Lyons instead discloses "each one or more of the data bytes contain important data and non-important data." The Examiner appears to equate two types of information (i.e., data) – important and non-important – to information and no information.

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The deficiencies of both Jun and Lyons notwithstanding, Applicant further submits that one of ordinary skill in the art, at the time the present invention was made, having only the cited references before him, would not find teaching or motivation sufficient to prompt him to: 1) Evaluate the Jun reference and understand it, including its apparent teaching – at the packet level – of substituting data (i.e., information) for null packets; 2) spontaneously decide that only that portion of the Jun reference was wrong, and that – at a bit level – it would be desirable to have both information and non-information bits within a single byte; 3) seek out and find the Lyons reference; 4) speculatively read into the Lyons reference an equivalency between important data and

information, and between non-important data and no information; 4) speculatively and selectively cull from Lyons a byte structure based upon such an equivalency; and 5) successfully modify Jun's packet level operations and constructs to function on a bit level to integrate the inferred Lyons byte structure.

Applicant respectfully submits that there is no teaching or suggestion in either Jun or Lyons sufficient to motivate one of ordinary skill to embark upon such a highly speculative and selective combination of two references. Even if such a complicated effort were successful, the result would still not yield the required limitations of claim 17.

Claim 17 overcomes the rejection and is in allowable form. Applicant respectfully requests reconsideration and allowance of claim 17.

d. Claim 18

Claim 18 depends from allowable claim 17 and provides further limitations distinguishing over the cited references or provides claim differentiation.

Claim 18 overcomes the rejection and is in allowable form. Applicant respectfully requests reconsideration and allowance of claim 18.

e. Claim 23

The Examiner concedes that "Jun does not disclose each of one or more of the data bytes containing both bearing [sic] and non-information bearing bits."

Applicant agrees.

Applicant submits that Jun neither teaches nor suggests a data byte "containing both information bearing bits and non-information bearing bits", nor any reason why such a byte structure might be necessary or desirable. Furthermore, Applicant submits that Jun appears – at the packet level – to teach away from non-information bearing packets. Jun teaches and suggests the desirability of substituting training data (i.e., information) for null packets. (Col. 3, lines 23-24; Col. 9, lines 30-32).

Nonetheless, the Examiner claims that "it would have been obvious to one of ordinary skill in the art to combine the teachings of Jun and Lyons, as a whole, for receiving and viewing HDTV television programs and other programming in an efficient, precise manner" since "Lyons teaches that each of the one or more of the data bytes containing both bearing bits and non-information bearing bits."

The Examiner then, parenthetically, points out a fatal flaw in the suggested interpretation of Lyons. The Examiner concedes that Lyons instead discloses "each one or more of the data bytes contain important data and non-important data." The Examiner appears to equate two types of information (i.e., data) – important and non-important – to information and no information.

Applicant respectfully submits that non-important information is not equivalent to no information.

Furthermore, Applicant can find no such equivalency taught or suggested in Lyons. Applicant respectfully requests that the Examiner specifically cite the portion of Lyons that teaches or suggests equivalency between non-important information and no

information, respectfully noting that the citations made by the Examiner do not appear to show any such teaching or suggestion.

The deficiencies of both Jun and Lyons notwithstanding, Applicant further submits that one of ordinary skill in the art, at the time the present invention was made, having only the cited references before him, would not find teaching or motivation sufficient to prompt him to: 1) Evaluate the Jun reference and understand it, including its apparent teaching – at the packet level – of substituting data (i.e., information) for null packets; 2) spontaneously decide that only that portion of the Jun reference was wrong, and that – at a bit level – it would be desirable to have both information and non-information bits within a single byte; 3) seek out and find the Lyons reference; 4) speculatively read into the Lyons reference an equivalency between important data and information, and between non-important data and no information; 4) speculatively and selectively cull from Lyons a byte structure based upon such an equivalency; and 5) successfully modify Jun's packet level operations and constructs to function on a bit level to integrate the inferred Lyons byte structure.

Applicant respectfully submits that there is no teaching or suggestion in either Jun or Lyons sufficient to motivate one of ordinary skill to embark upon such a highly speculative and selective combination of two references. Even if such a complicated effort were successful, the result would still not yield the required limitations of claim 23.

Claim 23 overcomes the rejection and is in allowable form. Applicant respectfully requests reconsideration and allowance of claim 23.

f. Claim 24

Claim 24 depends from allowable claim 23 and provides further limitations distinguishing over the cited references or provides claim differentiation.

Claim 24 overcomes the rejection and is in allowable form. Applicant respectfully requests reconsideration and allowance of claim 24.

IV. SECOND REJECTION UNDER 35 U.S.C. § 103

The Office Action rejects Claims 9-10 under 35 U.S.C. § 103(a) as being unpatentable over Jun in view of U.S. Patent No. 4,677,625 to Betts et al. ("Betts"). This rejection is respectfully traversed.

Again, Applicant objects to the rejections based on the Jun reference as being improper, since Jun is not a proper prior art reference. The present application was filed on February 12, 2001. The Jun patent was filed on November 28, 2000 – less than 3 months prior to the filing of the present application – and claims foreign application priority to June 12, 2000 – only 9 months prior to the filing of the present application. Applicant respectfully requests the withdrawal of all rejections improperly based upon the Jun reference.

Impropriety of the Jun reference notwithstanding, Applicant respectfully submits that the Examiner has improperly rejected these claims with highly speculative and highly selective hindsight combinations of the cited references – combinations not prospectively taught or suggested to one of ordinary skill in the art at the time the present invention was made.

Applicant addresses the rejection of each claim as follows.

a. Claim 9

Currently, claim 9 requires "a first data packet switch before said Reed Solomon encoder capable of determining whether a data packet is a full rate data packet or a half rate data packet, said first data packet switch capable of sending a full rate data packet to said Reed Solomon encoder and capable of sending a half rate data packet to said data interleaver" and "a second data packet switch after said trellis encoder capable of determining whether a data packet is a full rate data packet or a half rate data packet, said second data packet switch capable of sending a full rate data packet to a multiplexer and capable of sending a half rate data packet to an exclusive OR unit."

The Examiner concedes that "Jun does not specifically disclose a first data packet switch before said Reed Solomon encoder capable of determining whether a data packet is a full rate data packet or a half rate data packet, said first data packet switch capable of sending a full rate data packet to said Reed Solomon encoder and capable of sending a half rate data packet to said data interleaver; and a second data packet switch after said trellis encoder capable of determining whether a data packet is a full rate data packet or a half rate data packet, said second data packet switch capable of sending a full rate data packet to a multiplexer and capable of sending a half rate data packet to an exclusive OR unit."

Applicant agrees.

Despite this deficiency, the Examiner claims that "it would have been obvious to

one of ordinary skill in the art to combine the teachings of Jun and Betts, as a whole, for implementing the data switches" since, as the Examiner claims, "Betts teaches the use of two data switches, as disclosed in fig. 1, elements 16 and 42."

Applicant respectfully disagrees.

Applicant finds that Betts discloses a transmitter utilizing multiple trellis encoders 18-24. A switching circuit 16 receives four inputs X1-X4 from a randomizer 10 and provides the four inputs to one of the trellis encoders 18-24. A second switching circuit 42 receives the outputs from the trellis encoders 18-24 and provides the outputs to a QAM encoder 44.

None of the switching circuits of Betts provides packets to either a "Reed Solomon encoder" or a "data interleaver" as recited in Claim 9. Similarly, none of the switching circuits of Betts provides packets to either a "multiplexer" or an "exclusive OR unit." The switching circuits of Betts do not provide *different kinds of packets* to a "multiplexer" and an "exclusive OR unit."

Applicant further finds that Jun discloses that the data interleaver is not used to process null packets – explicitly teaching against the provision of null packets to the data interleaver.

Thus, in order to selectively and speculatively combine the Jun and Betts references as the Examiner has suggested - at the time the present invention was made, having only the cited references before him, without benefit of the present disclosure – one of ordinary skill in the art would have to: 1) Evaluate the Jun reference and

understand it, including its explicit teaching against the provision of null packets to the data interleaver; 2) disregard that teaching and spontaneously decide that the system of Jun needed to implement switches; 3) seek out and find the Betts reference; 4) selectively cull two switching circuits from Betts, disregarding the rest of Betts architecture – including Betts' randomizer, multiple trellis encoders, and QAM encoder – and operations directed toward a different issue; and 5) successfully modify Jun's architecture and operations to incorporate switching circuits that perform a function contrary to Jun's own teachings.

Applicant respectfully submits that there is no teaching or suggestion in either Jun or Betts sufficient to motivate one of ordinary skill to embark upon such a highly speculative and selective combination of two references. In fact, Jun teaches away from such a combination. Even if such a complicated combination effort were successful, the result would still not yield the required limitations of claim 9.

Claim 9 overcomes the rejection and is in allowable form. Applicant respectfully requests reconsideration and allowance of claim 9.

b. Claim 10

Claim 10 depends from allowable claim 9 and provides further limitations distinguishing over the cited references or provides claim differentiation.

Claim 10 overcomes the rejection and is in allowable form. Applicant respectfully requests reconsideration and allowance of claim 10.

V. CONCLUSION

The Applicant respectfully asserts that all pending claims in this application are in condition for allowance and respectfully requests full allowance of the claims.

SUMMARY

If any outstanding issues remain, or if the Examiner has any further suggestions for expediting allowance of this application, the Applicants respectfully invite the Examiner to contact the undersigned at the telephone number indicated below or at *wmunck@davismunck.com*.

The Commissioner is hereby authorized to charge any fees connected with this communication (including any extension of time fees) or credit any overpayment to Davis Munck Deposit Account No. 50-0208.

Respectfully submitted,

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Date: Oct 12, 2005

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